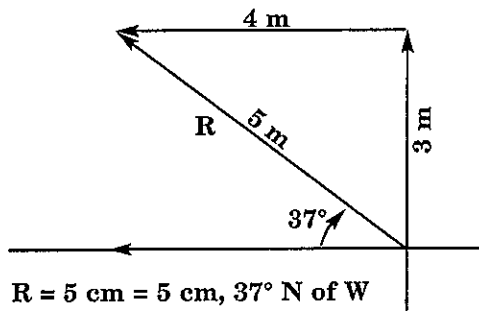


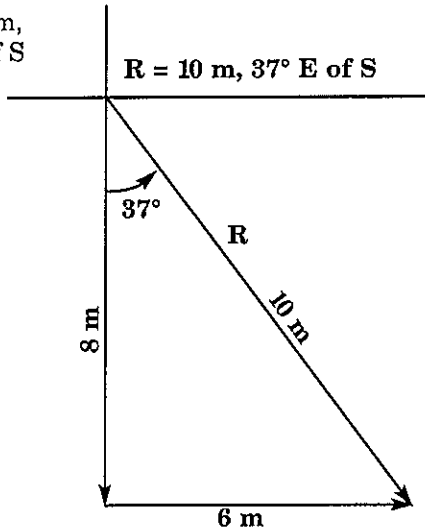
# VECTORS PACKET SOLUTIONS.

TRY IT: SKILL 5.1 IV, PG 033

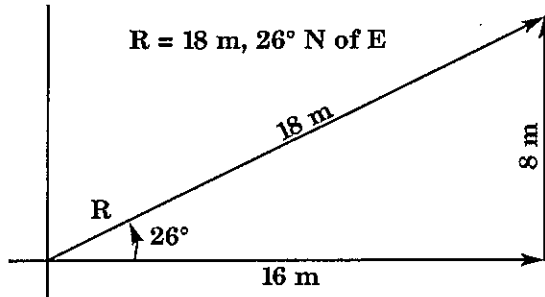
2a  $R = 5 \text{ cm} = 5 \text{ m}, 37^\circ \text{ N of W}$



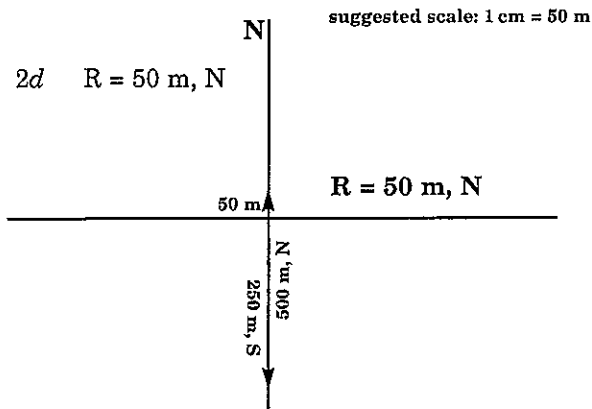
2b  $R = 10 \text{ m}, 37^\circ \text{ E of S}$



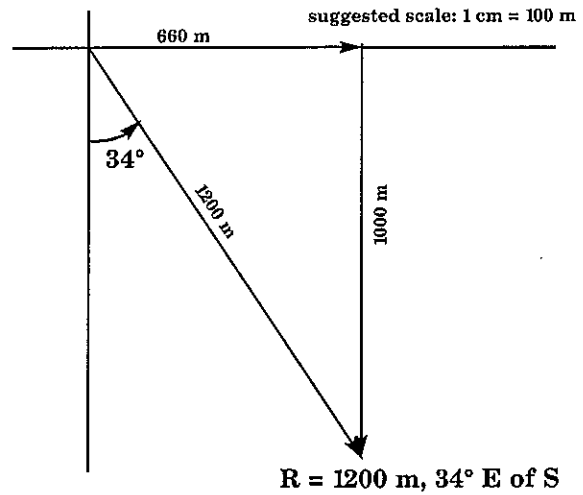
2c  $R = 18 \text{ m}, 26^\circ \text{ N of E}$



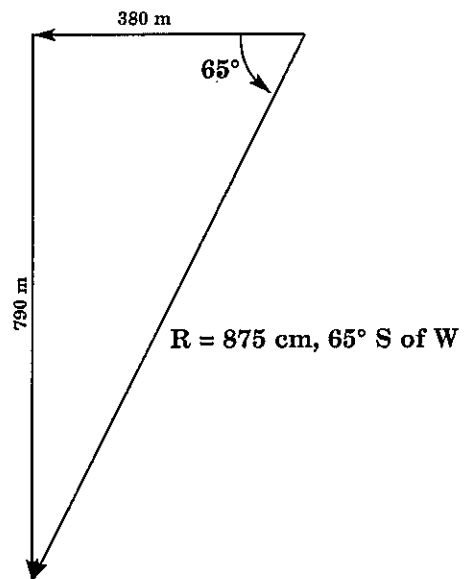
2d  $R = 50 \text{ m}, \text{N}$



2e  $R = 1200 \text{ m}, 34^\circ \text{ E of S}$



2f  $R = 875 \text{ cm}, 65^\circ \text{ S of W}$



TRY IT: SKILL 5.1, M 1.1, PG 034

3a  $5 \text{ m} @ 37^\circ \text{ N of W}$

3b  $10 \text{ m} @ 37^\circ \text{ E of S}$

3c  $17.9 \text{ m} @ 26.6^\circ \text{ N of E}$

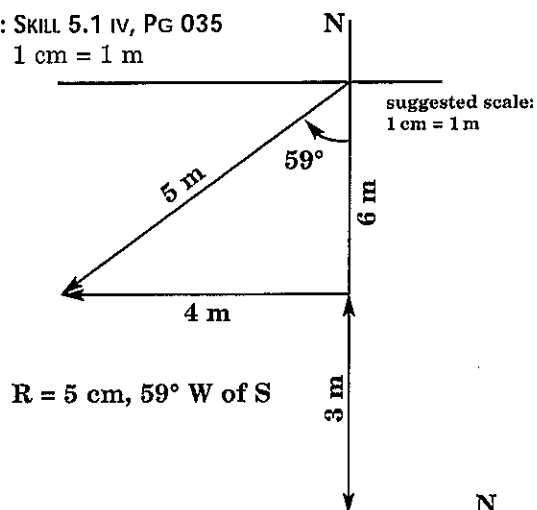
3d  $50 \text{ m}, \text{N}$

3e  $1198 \text{ m} @ 56.6^\circ \text{ S of E}$

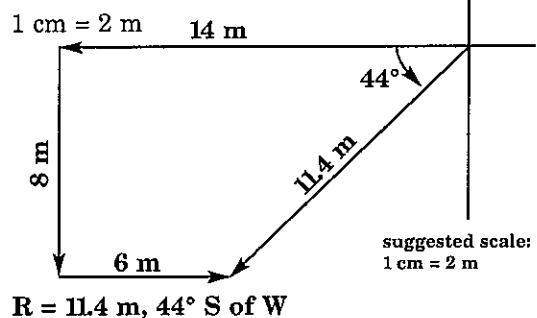
3f  $877 \text{ cm} @ 64^\circ \text{ S of W}$

TRY IT: SKILL 5.1 IV, PG 035

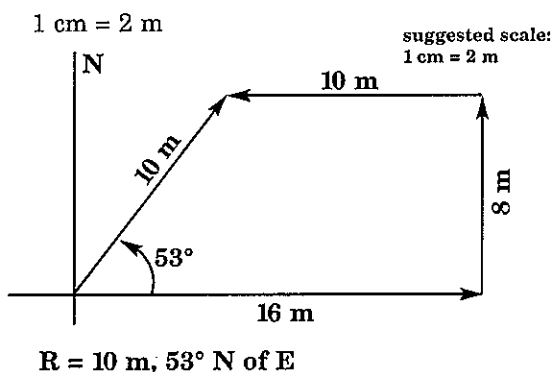
4a 1 cm = 1 m



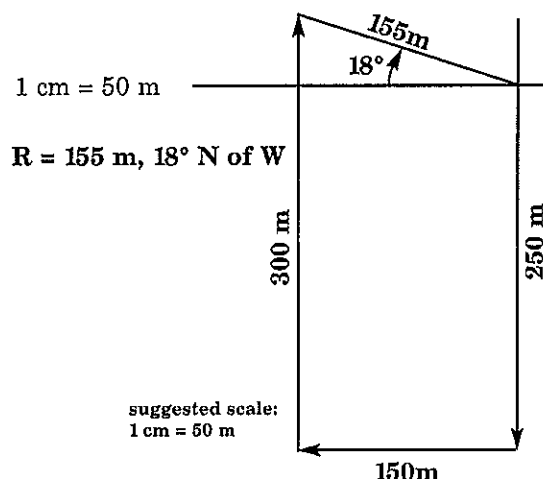
4b



4c



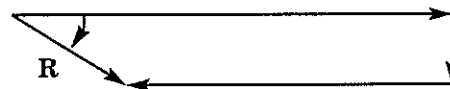
4d



4e

scale 1 cm = 100 m

$R = 1.9 \text{ cm} = 190 \text{ m}, 34^\circ \text{ S of E}$



TRY IT: SKILL M 1.1 & M 3.1, PG 037

5

Velocity (m/s)	Angle degrees	x-components (m/s)	y-components (m/s)
100	10	98.5 m/s	17.4 m/s
100	30	86.6 m/s	50.0 m/s
100	45	70.7 m/s	70.7 m/s
100	60	50.0 m/s	86.7 m/s
100	90	0.00 m/s	100 m/s

TRY IT: SKILL 5.1 IV, M 3.1, PG 039

6 67.4 m @  $67^\circ \text{ S of E}$

7a 362.8 m @  $49.5^\circ \text{ N of E}$

7b 398.8 m @  $5.4^\circ \text{ W of N}$

8 One satellite will provide your distance from the satellite, two signals will give you two possible locations, the third is needed to narrow it down to a single location.

## CHAPTER 2 ASSESSMENTS

### PART A - QUESTIONS, PG 043

1	2	8	4
2	1	9	3
3	4	10	2
4	2	11	1
5	1	12	1
6	3	13	4
7	1	14	1

### PART B - QUESTIONS, PG 044

- 15 4
- 16 3
- 17 1
- 18 4
- 19 4
- 20 2
- 21 14.4 km
- 22a 50 N
- 22b 86.6 N
- 23 13.2 m
- 24 800 m
- 25a 192.8 N
- 25b 229.8 N
- 26 Displacement occurs in straight line motion, distance does not have to, and therefore is greater than the displacement.

- 27 4 blocks, west
- 28 30 m, north
- 29 4 km
- 30 2 blocks, east
- 31 50 N
- 32 500 km
- 33 8 N

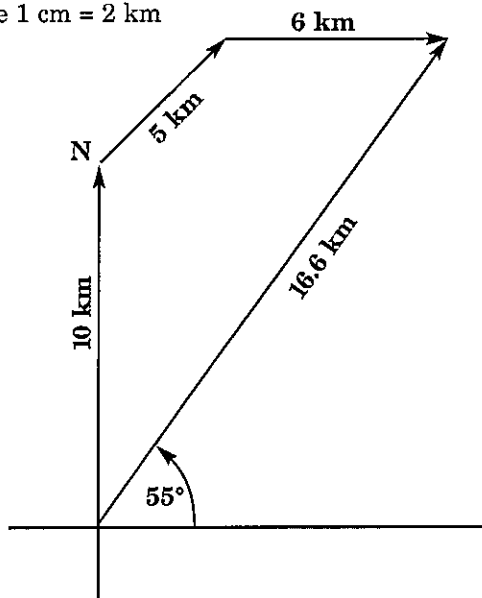
**PART C – QUESTIONS, PG 048**

34  $\sin \phi = \frac{F_{\text{opp}}}{F}$  (or  $F$  vertical)  
 $F_{\text{opp}} = F \sin \phi$   
 $= 100 \text{ N} \sin 60^\circ$   
 $= 86.6 \text{ N}$

$\cos \phi = \frac{F_{\text{horizontal}}}{F}$

$F_{\text{horiz}} = F \cos \phi$   
 $= 100 \text{ N} \cos 60^\circ$   
 $= 50.0 \text{ N}$

35 scale 1 cm = 2 km



35a Displacement = 16.6 km

35b Distance = 10 km + 5 km + 6 km = 21 km

**CHAPTER 3**

**KINEMATICS**

**KEY IDEA 5**

**PERFORMANCE INDICATOR 5.1**

TRY IT: PG 051

1



TRY IT: PG 052

2 B

3 A

4  $\longrightarrow \longrightarrow \longrightarrow \longrightarrow \longrightarrow$

TRY IT: SKILL 5.1i, 5.1ii, PG 055

5 graph 1:  $m = 4.17 \text{ m/s}$

6 graph 2:  $m = 0.1 \text{ m/s}$

TRY IT: SKILL M 3.1, 5.1i, 5.1ii, PG 056

[Note: Graphs below are of a general shape.]

